Ultra-small Contact Image Sensor Heads, covering the character recognition

LSH2001-AA10A

Easy to mount on whatever sets because of its small size, this is the device best suitable for whatever detecting thanks to its deep focus point and high recognition accuracy.

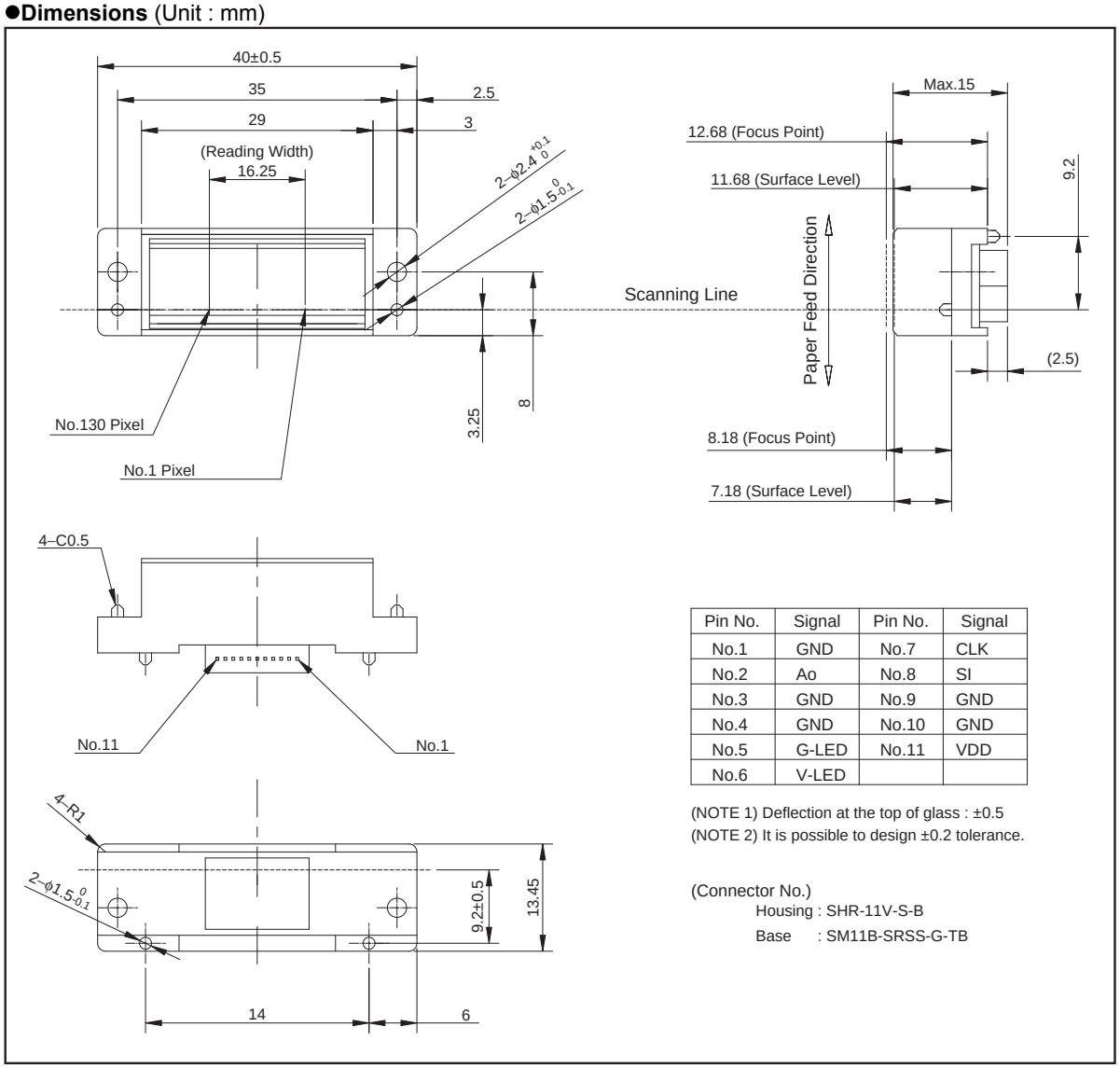
●Applications

Detection sets (e.g. surface, paper edge, paper type)

●Features

1） Its deep focus point enables scanning of the object without close contact to the glass bed of scanner, so that both the scanned object and the scanner bed won't be damaged.
2）Screw holes and the alignment pin are provided for convenience of mounting.
3）16.25mm read width (40mm total width)

●Dimensions (Unit : mm)



Pin No.	Signal	Pin No.	Signal
No.1	GND	No.7	CLK
No.2	Ao	No.8	SI
No.3	GND	No.9	GND
No.4	GND	No.10	GND
No.5	G-LED	No.11	VDD
No.6	V-LED		

(NOTE 1) Deflection at the top of glass : ±0.5
(NOTE 2) It is possible to design ±0.2 tolerance.

(Connector No.)
Housing : SHR-11V-S-B
Base : SM11B-SRSS-G-TB

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●Characteristics

Parameter	Symbol	Typ.	Unit
Effective scanning width	–	16.25	mm
Primary scan dot density	–	200	dpi
Total dot number	–	128	dots
Power supply voltage	V_{DD}	3.3	V
Scanning speed	SLT	0.1	ms / line
Clock frequency	CLK	8	MHz
Maximum dynamic range	VRMax.	1.0	V
Minimum dynamic range	VRMin.	0.5	V
Dark output	Vod	0.8±0.1	V
Operating temperature	–	5 to 45	°C

●Pin assignments

No.	Circuit	I / O	Functions
1	GND	I	Ground
2	Ao	O	Analog Output
3	GND	I	Ground
4	V_{REF}	I	Reference Voltage
5	R-GND	I	LED ground
6	V-LED	I	LED power supply
7	CLK	I	Clock
8	SP	I	Start Pulse
9	GND	I	Ground
10	GND	I	Ground
11	V_{DD}	I	Power Supply
12	NC	–	

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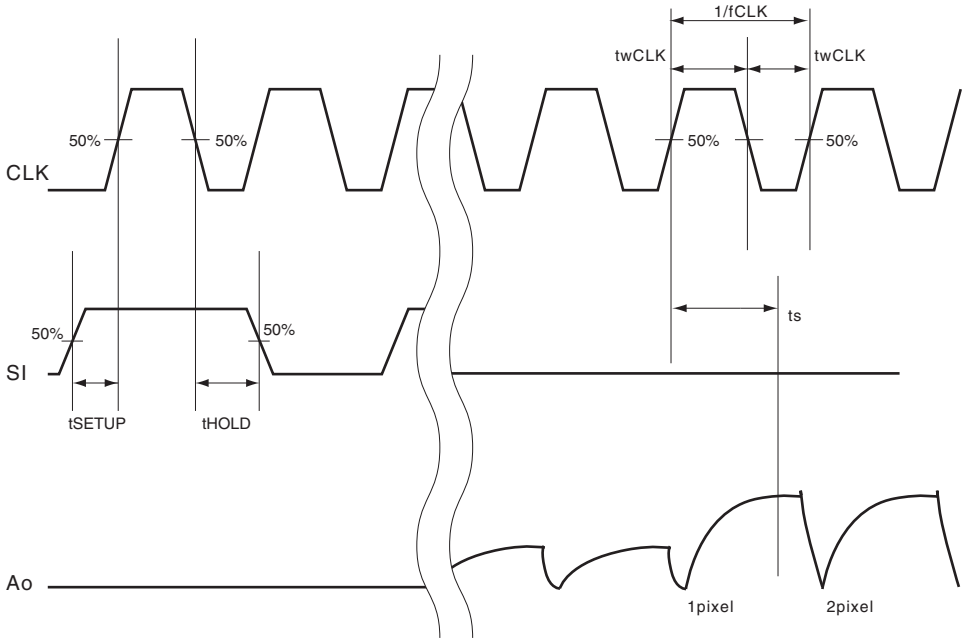
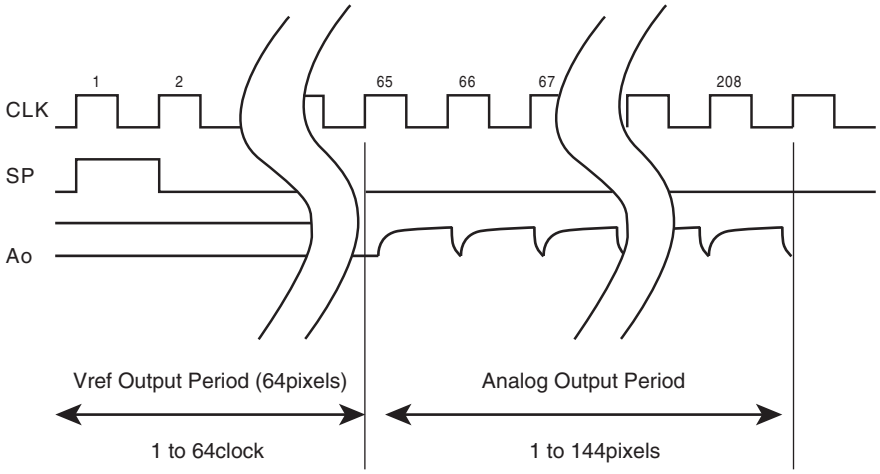
●Timing chart

(a) CLK Timing Chart



(b) Data Output Timing Chart

After turning on the SP pulse, the analog output shape starts from the setting up point of 65 clock pulse.



Note) Output blank part cannot be used as the analog output standard level.

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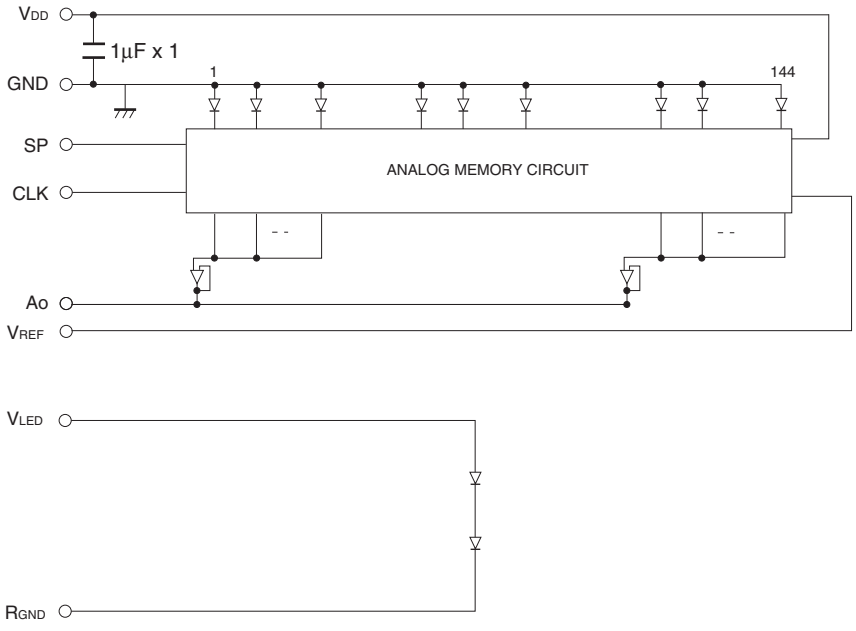
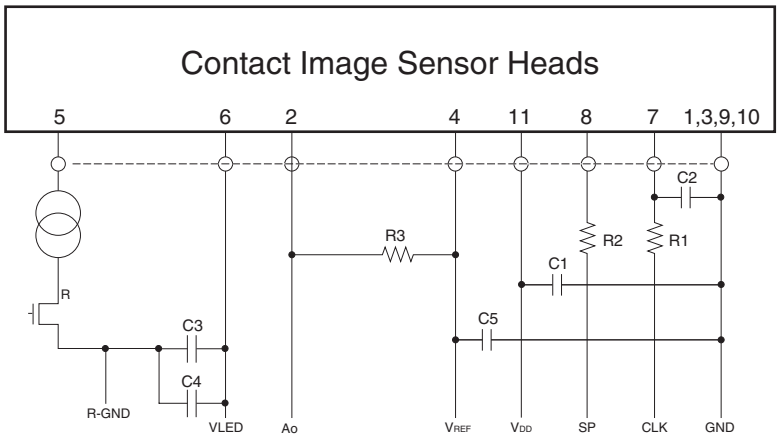
●**Inner circuit**



●**Peripheral circuit**



* R1=R2=100Ω
R3=100kΩ
C1=C5=47µF
C2=100pF
C3=100µF, C4=0.1µF

Please adjust the value of resistance to fit your interface circuit.

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